SAFETY & WARNINGS

1. Install in accordance with national and local electrical code regulations.
2. This product is intended to be installed and serviced by a qualified, licensed electrician.
3. Do not modify or disassemble this product beyond instructions or the warranty will be void.
4. All plastics are affected by the elements and may shift in color and other properties after product installation, particularly with direct exposure to sun, chlorinated water, and other chemicals.
5. Only install with a Listed Class 2 DC LED driver.
6. To avoid Voltage Drop, ensure wire gauge used with LED Strip Light is sufficient to keep under 3% voltage drop.
7. Do not exceed maximum run recommended for Strip Light.
8. Diode LED Strip Light is designed to be cut at designated cut points only. Cutting anywhere other than the cut points will result in damage to the Strip Light.
9. Failure to follow safety warnings, and installation instructions will void the warranty for this product.

QUICK SPECS / MODELS

<table>
<thead>
<tr>
<th>Input</th>
<th>24VDC Constant Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>3W/ft. (1.5W/cut point)</td>
</tr>
<tr>
<td>Max Run</td>
<td>25.29 ft.</td>
</tr>
<tr>
<td>Ambient Temp †</td>
<td>-4° - 140°F (-20° - 60°C)</td>
</tr>
</tbody>
</table>

† Do not install product in environment outside listed temperature.

Wiring Diagram

- **Black Wire** = 24VDC +
- **White Wire** = Blue Light
- **Red Wire** = Red Light
- **Green Wire** = Green Light
PRE-INSTALLATION

ADDITIONAL ACCESSORIES

Mounting Bracket
DI-HLS-MTBR

Mounting Channel
DI-HLS-MTCH

HANDLE PRODUCT WITH CARE!

DO NOT BEND LED STRIP LIGHT TO A DIAMETER LESS THAN 4 INCHES.

DO NOT BEND LED STRIP LIGHT ON A HORIZONTAL PLANE.

DO NOT COVER STRIP LIGHT WITH ANY MATERIALS.

DO NOT FOLD, CREASE, OR TWIST LED STRIP LIGHT.

DO NOT POWER STRIP LIGHT WHILE ATTACHED TO SPOOL OR TIGHTLY COILED.

WIRE GAUGE & VOLTAGE DROP

Ensure appropriate wire is installed between driver, fixture, and any controls in between. When choosing wire, factor in voltage drop, amperage rating, and type (in-wall rated, wet location rated, etc.)

For more information, refer to system diagrams and voltage drop charts at the end of this document.
HYDROLUME® SLIM RGB LED Strip Light

INSTALLATION GUIDE

REQUIRED COMPONENTS

1. Appropriate Junction Box
2. Class 2 rated Driver
3. Color Controller
4. HYDROLUME® SLIM RGB LED Strip Light
5. HYDROLUME® SLIM Mounting Brackets or Channels

REQUIRED TOOLS

1. Flathead Screwdriver
2. Ruler / Tape Measure
3. Wire Stripper
4. Wood Screws

INSTALLATION (2108)

INSTALLATION: UL LISTED 2108 MODELS
FOR APPLICATIONS THAT ARE NOT IN A POOL OR SPA.

1) TURN POWER OFF AT CIRCUIT BREAKER

SHOCK HAZARD! May result in serious injury or death.
Turn power OFF at circuit breaker prior to installation.

2) DETERMINE LOCATION TO INSTALL COMPONENTS

1) Class 2 Driver 2) Control 3) Hydrolume

WIRE GAUGE & VOLTAGE DROP
Ensure applicable wire is installed between driver, fixture, and any controls in between. When choosing wire, factor in voltage drop, amperage rating, and type (in-wall rated, wet location rated, etc.)
**INSTALLATION (2108) (CONT.)**

3. **MOUNT HYDROLUME® SLIM RGB LED STRIP LIGHT TO SURFACE**
   See mounting options a & b (below).

4. **ATTACH CONTROL AND DRIVER**
   Verify compatible driver is installed. Utilize applicable wiring when installing outdoors. (Use of wet location-rated junction box recommended)

5. **REVIEW SYSTEM**
   Ensure all polarities are correct and connections are secure.

6. **TURN POWER ON AT CIRCUIT BREAKER**

**HYDROLUME® SLIM MOUNTING BRACKETS**
Mark placement for HYDROLUME® SLIM Mounting Brackets -- roughly 12 inches apart. Fasten brackets with M2.9 (#4) screw or similar size (not provided). Once mounted, fasten HYDROLUME® SLIM RGB LED Strip Light to brackets.

**HYDROLUME® SLIM MOUNTING CHANNEL**
Mount channel to desired surface using minimum 2x M2.9 (#4) screws or similar size (not provided). Once channel is mounted, firmly press HYDROLUME® SLIM RGB LED Strip Light into channel pressing one end to the other.

**INSTALLATION (676)**

**INSTALLATION: UL LISTED 676 MODELS**
*FOR POOL/SPA APPLICATIONS*
For other applications that are not in a pool or spa, see INSTALLATION - UL LISTED 2108 MODELS.

**NEC 680**
When installing in water, install in accordance with NEC 680. Per UL instructions it is required to mount strip light with HYDROLUME Mounting Channel (DI-HL-MTCH) for these applications.

**TURN POWER OFF AT CIRCUIT BREAKER**

**SHOCK HAZARD!** May result in serious injury or death. Turn power OFF at circuit breaker prior to installation.
2) DETERMINE LOCATION TO INSTALL COMPONENTS
Refer to SYSTEM DIAGRAMS

1) Class 2 Driver  2) Control  3) Hydrolume

WIRE GAUGE & VOLTAGE DROP
Ensure applicable wire is installed between driver, fixture, and any controls in between. When choosing wire, factor in voltage drop, amperage rating, and type (in-wall rated, wet location rated, etc.).

3) ADHERE MOUNTING CHANNEL TO SURFACE

ATTENTION: FIBERGLASS & VINYL LINED POOLS
Unlike concrete pools, most fiberglass and vinyl lined pools have strict warranty guidelines that do not allow the user to deface the pool wall surface. Diode LED does not recommend mounting to fiberglass or vinyl pool walls and/or defacing the surface in any way (ex. drilling into surface to route lead wires). It is recommended to mount to a separate pool coping or lip to ensure your pool warranty is not voided. Always consult with your pool supplier and contractor for proper installation of 3rd party products.

For concrete pools, seal conduit entry with pool-grade silicone sealant. **DO NOT drill holes in fiberglass pools/hot tubs or vinyl-lined pools.** An alternate method is to route the wire directly out of pool.
INSTALLATION (676) (CONT.)

4 ATTACH CONTROL AND DRIVER
Verify a compatible constant voltage driver is installed. Utilize applicable wiring when installing outdoors.

5 REVIEW SYSTEM
Ensure all polarities are correct and connections are secured.

6 TURN POWER ON AT CIRCUIT BREAKER

TROUBLESHOOTING

<table>
<thead>
<tr>
<th>Shift in brightness and/or kelvin</th>
<th>• Ensure an appropriate gauge of wire is installed between strip light and LED driver. See VOLTAGE DROP CHARTS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some LEDs are not functional</td>
<td>• Ensure strip light has not been bent excessively, which could damage circuitry.</td>
</tr>
<tr>
<td>Lights are flickering</td>
<td>• Ensure a compatible driver and/or dimming control is installed. Check for loose connections.</td>
</tr>
<tr>
<td>Lights are turning on/off repeatedly</td>
<td>• Ensure driver is not overloaded. An overloaded driver will trip the internal auto-reset (of driver) repeatedly, turning the system on/off.</td>
</tr>
</tbody>
</table>

VOLTAGE DROP CHARTS
For best performance and lumen output, ensure proper wire gauge is installed to compensate for voltage drop of low voltage circuits.

Example: 24V Voltage Drop & Wire Length Distance Chart

<table>
<thead>
<tr>
<th>Wire Gauge</th>
<th>10 W .42 A</th>
<th>20 W .83 A</th>
<th>30 W 1.3 A</th>
<th>40 W 1.7 A</th>
<th>50 W 2.1 A</th>
<th>60 W 2.5 A</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 AWG</td>
<td>134 ft.</td>
<td>68 ft.</td>
<td>45 ft.</td>
<td>33 ft.</td>
<td>27 ft.</td>
<td>22 ft.</td>
</tr>
<tr>
<td>16 AWG</td>
<td>215 ft.</td>
<td>109 ft.</td>
<td>72 ft.</td>
<td>54 ft.</td>
<td>43 ft.</td>
<td>33 ft.</td>
</tr>
<tr>
<td>14 AWG</td>
<td>345 ft.</td>
<td>174 ft.</td>
<td>115 ft.</td>
<td>86 ft.</td>
<td>69 ft.</td>
<td>55 ft.</td>
</tr>
<tr>
<td>12 AWG (C)</td>
<td>539 ft.</td>
<td>272 ft.</td>
<td>181 ft.</td>
<td>135 ft.</td>
<td>108 ft.</td>
<td>90 ft.</td>
</tr>
<tr>
<td>10 AWG</td>
<td>784 ft.</td>
<td>397 ft.</td>
<td>263 ft.</td>
<td>197 ft.</td>
<td>158 ft.</td>
<td>121 ft.</td>
</tr>
</tbody>
</table>

1 Determine load size. Let’s assume load is 55 W. Round up to nearest load.

2 Determine distance from driver to load. Let’s assume the distance is 90 ft.

3 It is recommended to install 12 AWG to eliminate excess voltage drop.

24V Voltage Drop & Wire Length Distance Chart

<table>
<thead>
<tr>
<th>Wire Gauge</th>
<th>10 W .42 A</th>
<th>20 W .83 A</th>
<th>30 W 1.3 A</th>
<th>40 W 1.7 A</th>
<th>50 W 2.1 A</th>
<th>60 W 2.5 A</th>
<th>70 W 2.9 A</th>
<th>80 W 3.3 A</th>
<th>100 W 4.2 A</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 AWG</td>
<td>134 ft.</td>
<td>68 ft.</td>
<td>45 ft.</td>
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<td>27 ft.</td>
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<td>43 ft.</td>
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<td>272 ft.</td>
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<td>108 ft.</td>
<td>90 ft.</td>
<td>77 ft.</td>
<td>68 ft.</td>
<td>56 ft.</td>
</tr>
<tr>
<td>10 AWG</td>
<td>784 ft.</td>
<td>397 ft.</td>
<td>263 ft.</td>
<td>197 ft.</td>
<td>158 ft.</td>
<td>131 ft.</td>
<td>112 ft.</td>
<td>98 ft.</td>
<td>82 ft.</td>
</tr>
</tbody>
</table>
### HYDROLUME® SLIM RGB LED Strip Light

**INSTALLATION GUIDE**

**SYSTEM DIAGRAMS**

The following diagrams are provided as example system designs. For information regarding larger systems or systems not pictured below, please see our web page or contact technical support. Always review each component installation guide for detailed and up-to-date wiring instructions. Install in accordance with national and local electrical codes.

**RGB/RGBW COLOR CONTROL SYSTEMS**

![Diagram of RGB/RGBW Color Control System]

**ADDITIONAL COLOR CONTROL SYSTEMS**

TOUCHDIAL™, ATTRIBUTE™, and other control system diagrams are available on-line at www.DiodeLED.com.

**DMX CONTROL SYSTEM**

![Diagram of DMX Control System]

1. Driver may not require a fault ground connection. Refer to driver specifications for additional information.

2. See fixture specifications for maximum series run limits.

صباغی HYDROLUME® SLIM RGB LED Strip Light

**설명서**

시스템 도면

이들 도면은 예시 시스템 디자인을 제공합니다. 본 시스템은 큰 시스템이나 도면에 나타나지 않는 시스템의 정보를 위해 웹 페이지에 보거나 기술 지원에 문의하십시오. 각 구성 요소의 설치 설명서를 검토하여 정확하고 최신의 연결 지침을 확인하시오. 볼을 한 국가 및 지역 전기 규정에 따라 설치해 주십시오.

**RGB/RGBW 색상 제어 시스템**

![RGB/RGBW 색상 제어 시스템 도면]

**追加カラーコントロールシステム**

TOUCHDIAL™, ATTRIBUTE™, 他のコントロールシステムの図はwww.DiodeLED.comにお在りにて可です。

**DMX 제어 시스템**

![DMXコントロールシステム図]

1. ドライバーは接地線接続を必要としない場合があります。ドライバーユーサーズガイドを参照してください。

2. 具体的な仕様を参照し、最大の連続ランを参照してください。

diode led® 877.817.6028 Toll Free | 415.592.1596 Fax | www.DiodeLED.com | info@DiodeLED.com

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